

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-7, 12-18, and 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holsclaw et al. (6,482,370) in view of Scott (3,363,570).**

3. Regarding claim 1, Holsclaw et al. discloses a dental unit (Fig. 1) comprising a feed water line 12 capable of leading water to at least one water outlet point; a pressure chamber 20 in connection with the feed water line 12 and a compressed air line (shown as the un-labeled arrow line above the chamber 20; column 2 lines 58-61; column 10 lines 53-5). Holsclaw et al. disclose the pressure chamber 20 being arranged in functional connection with pressure control means, e.g. 36 or 38 (column 5 lines 54-58).

4. However, Holsclaw et al. fail to disclose such pressure controlling means capable of controlling the pressure in the pressure chamber 20 according to a desired pressure level via the compressed air line. Scott also discloses a pressure chamber 15 in connection with a pressure air line 25 having regulator 21 capable of controlling the pressure in the chamber 15 according to a desired pressure via the compressed air line 25 (Fig. 1; column 3 lines 20-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by incorporate such pressure controlling device/regulator in order to control the pressure in the pressure chamber according to a desired pressure level as explicitly taught by Scott.

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5. Holsclaw et al. are further silent to a pump arranged along the feed water line upstream of the pressure chamber capable of pumping water to the pressure chamber when the pressure in the pressure chamber is greater than a pressure in the feed water line. Scott discloses the pressure chamber 15 adapted to withstand super atmospheric pressure (column 3 lines 8-10) and pump 12, arranged along the feed water line 14 upstream of the pressure chamber 15, capable of pumping water into chamber 15 when the pressure therein is higher than the feed water line 14 (Fig. 1; column 3 lines 64-75). Note that Scott discloses a predetermined trip-out pressure of switch 23 being higher than pressure in line 14 but not to exceed pressure in chamber 15 (column 3 lines 64-71); therefore water is being pumped into chamber 15 via feed line 14 by pump 12 even when chamber 15 has a higher pressure than feed line 14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by incorporating such pump in order to pump water into the chamber even when the pressure in the chamber is higher than the pressure in the feed line as explicitly taught by Scott.

6. As to claims 2-3, Scott's pressure control device 21 includes a 3-way valve arrangement 26 (Fig. 1). As to claims 4-5, Holsclaw et al. fail to disclose means for recognizing height of the fluid level. Scott discloses means 30/34 for recognizing height of the fluid level, wherein the pump 12 is configured to pump water periodically into the chamber according to a signal, i.e. trip-out, from means 30/34 (column 4 lines 2-12). As to claims 6-7, Scott discloses of a reservoir chamber 10; it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by including a reservoir chamber as taught by Scott for storing water from the city line before being pumped into the pressure chamber so that the pressure chamber can be readily replenished. Note that the claimed overflow edge structure is very well known, such as the overflow edge/hole structure disposed near the top of

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household bathtub or sink wall. It would have been obvious incorporate such overflow edge structure to Holsclaw/Scott's reservoir chamber in order to ensure fluid level in the reservoir does not pass certain predetermined height. As to claim 12-13, it would have been obvious that the pressure chamber is detachable from the feed water line since city or public feed water line does not come with undetachable pressure chamber. Regarding the method claims 14-18 and 23, the claimed steps would have been obvious and naturally carried out when using the system disclosed by Holsclaw in view of Scott as detailed above.

7. **Claims 8-11, 19-22, and 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holsclaw et al. in view of Scott, and further in view of Yamada et al. (5,151,731).** Holsclaw/Scott fail to disclose the reservoir chamber being opened to atmospheric pressure and the claimed specifics of a feed link and detergent feed link to the reservoir chamber. Yamada et al. show a known water replenishing system (Fig. 7) having a storage chamber 12 being open to atmospheric pressure having distanced upstream feed links capable of feeding water and/or chemical/detergents into the chamber 12. Also note Figure 10 of Yamada shows two-way circulation between at least two of the shown reservoirs/chambers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw/Scott's reservoir chamber being open to atmospheric pressure as a choice well within the skill of an artisan while yielding the same results and to include, and to include such chemical/detergent feed links if required by the dental procedure to include cleaning agents for cleaning teeth. The method claims would have been obvious and naturally carried out when using the system disclosed by Holsclaw in view of Scott and further in view of Yamada as detailed above.

Response to Arguments

8. Applicant's arguments with respect to the ground(s) of rejection of claims 1-24 under 35 U.S.C. 112, first paragraph, have been fully considered and are persuasive. Said ground(s) of rejection under U.S.C. 112, first paragraph, has been withdrawn.

9. Applicant's arguments regarding the ground(s) of rejection of claims 1-24 under prior art have been considered but are not persuasive. Applicant argued that Scott does not teaches of a pump configured to pump water into the pressure chamber when the pressure in the pressure chamber is greater than the pressure in the feed water line. The examiner maintains that Scott explicitly teaches of the tank adapted to withstand superatmospheric pressure (column 3 lines 8-10), and a predetermined trip-out pressure being higher than the normal pressure in line 14 but not exceeding (superatmospheric) pressure in chamber 15 (column 3 lines 64-71); therefore water is being pumped into chamber 15 via feed line 14 by pump 12 even when chamber 15 has a higher pressure than feed line 14.

10. In response to applicant's argument that incorporating Scott's pump into Hosclaw would change Hosclaw's functions, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Furthermore, Applicant's arguments regarding incorporating Scott's pump which is configured to stop pumping to tank 15 at predetermined pressures in inlet line 14 and tank 15 would render Hosclaw's apparatus unsatisfactory for its intended purpose of continually providing water from the city water supply to the reservoir, are not persuasive. Hosclaw neither teaches of, nor

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against otherwise, continually providing water from the city water supply to the reservoir as argued by Applicant. The examiner maintains that incorporating Scott's pump into Hosclaw would not render Hosclaw unsatisfactory or defeated; instead the incorporation of Scott's pump which is configured to stop pumping to the tank/chamber at predetermined pressures would improve Hosclaw by safeguarding against unsafe conditions, e.g. pressures exceeding predetermined trip-out pressures, as taught by Scott.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EXAMINER whose telephone number is (571) 270-3002. The examiner can normally be reached on Monday-Friday 8:00AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Cris Rodriguez, at (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. If there are any inquiries that are not

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being addressed by first contacting the Examiner or the Supervisor, you may send an email inquiry to TC3700_Workgroup_D_Inquiries@uspto.gov.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
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